Search Forms
Search Results
Help
User Searches
Preferences
Logout

Refine Search

Search Results -

Term	Documents
SPERM	30161
SPERMS	462
(9 AND SPERM).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	6
(L9 AND SPERM).PGPB,USPT,USOC,EPAB,JPAB,DWPI.	6

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L11

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Tuesday, May 03, 2005 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L11	L9 and sperm	6	L11
L10	L9 and seminal plasma proteins	0	L10
L9	isoantigens	45	L9
L8	SPACA1	1	L8
L7	L6 and antigenic	47	L7
L6	seminal plasma protein	68	L6
DB=EPAB; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L5	WO-200153352-A2.did.	0	L5
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L4	L3 and pharm$	4	L4
L3	SAMP32	5	L3

L2	L1 and atrial natriretic peptide	0	L2
L1	US 5,670,340	2	L1

END OF SEARCH HISTORY

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1647

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	4	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	5	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	6	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	7	MAR 02	GBFULL: New full-text patent database on STN
NEWS	8	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	9	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	10	MAR 22	KOREAPAT now updated monthly; patent information enhanced
NEWS	11	MAR 22	Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS	12	MAR 22	PATDPASPC - New patent database available
NEWS	13	MAR 22	REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS	14	APR 04	EPFULL enhanced with additional patent information and new fields
NEWS	15	APR 04	EMBASE - Database reloaded and enhanced
NEWS	16	APR 18	New CAS Information Use Policies available online
NEWS	17	APR 25	Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAplus and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.
NEWS	18	APR 28	Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAplus

NEWS EXPRESS	JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005

```
=> file caplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 3 May 2005  VOL 142 ISS 19
FILE LAST UPDATED: 2 May 2005  (20050502/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

=> s seminal plasma protein
         14277 SEMINAL
            10 SEMINALS
         14281 SEMINAL
                  (SEMINAL OR SEMINALS)
        800391 PLASMA
         72746 PLASMAS
        807717 PLASMA
                  (PLASMA OR PLASMAS)
       1738748 PROTEIN
       1207485 PROTEINS
       2019275 PROTEIN
                  (PROTEIN OR PROTEINS)
L1          291 SEMINAL PLASMA PROTEIN
                  (SEMINAL(W)PLASMA(W)PROTEIN)

=> s SAMP32
L2            2 SAMP32

=> d L2 1-2 ibib,abs

L2   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2002:183183  CAPLUS
DOCUMENT NUMBER:          136:367041
TITLE:                    SAMP32, a testis-specific, isoantigenic
                          sperm acrosomal membrane-associated protein
AUTHOR(S):                Hao, Zhonglin; Wolkowicz, Michael J.; Shetty,
                          Jagathpala; Klotz, Kenneth; Bolling, Laura; Sen, Buer;
                          Westbrook, V. Anne; Coonrod, Scott; Flickinger,
                          Charles J.; Herr, John C.
CORPORATE SOURCE:         Department of Cell Biology, Center for Research in
                          Contraceptive and Reproductive Health, University of
                          Virginia, Charlottesville, VA, 22908, USA
SOURCE:                   Biology of Reproduction (2002), 66(3), 735-744
```

CODEN: BIREBV; ISSN: 0006-3363
PUBLISHER: Society for the Study of Reproduction
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To identify novel human sperm membrane antigens, we analyzed two-dimensional gels of sperm exts. containing hydrophobic proteins that partitioned into Triton X-114. Four protein spots with isoelec. points (pIs) ranging from 4.5 to 5.5 and apparent mol. wts. from 32 to 34 kDa were sequenced by mass spectrometry and found to contain common peptide sequences. Cloning the corresponding cDNA revealed that these protein spots were products of a single gene (**SAMP32**), encoding a protein of 32 kDa with a predicted pI of 4.57. **SAMP32** has a potential transmembrane domain in the carboxyl terminus and is phosphorylated in vivo on serine 256. Northern blotting of eight human tissues and RNA dot blotting of 76 human tissues showed that **SAMP32** expression was testis specific. **SAMP32** contained an amino terminal domain homologous to the major malarial circumsporozoite surface protein and a domain similar to that of Krp1 from Schizosaccharomyces pombe in its carboxyl terminus. The **SAMP32** locus consists of seven exons on chromosome 6q15-16.2. Antiserum against recombinant **SAMP32** recognized protein spots originally cored from a two-dimensional gel. This antiserum strongly stained the equatorial segment and faintly stained the acrosome cap of ejaculated human spermatozoa by immunofluorescence. Immunoelectron microscopy showed that **SAMP32** was associated with the inner acrosomal membrane in the principal and the equatorial segments of the sperm acrosome. By immunostaining enzyme-dissociated testicular cells, **SAMP32** was localized to Golgi phase round spermatids and subsequent stages of acrosome biogenesis. Recombinant **SAMP32** reacted with serum from an infertile man, suggesting that it is isoantigenic. Antibodies against recombinant **SAMP32** inhibited both the binding and the fusion of human sperm to zona-free hamster eggs.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:545744 CAPLUS
DOCUMENT NUMBER: 135:132766
TITLE: Sperm specific surface proteins and their use as targets for spermicidal contraceptive vaccines
INVENTOR(S): Hao, Zhonglin; Herr, John C.; Jayes, Friederike L.; Shetty, Jagathpala; Wolkowicz, Michael J.
PATENT ASSIGNEE(S): University of Virginia Patent Foundation, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001053352	A2	20010726	WO 2001-US1717	20010119
WO 2001053352	A3	20020404		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2397838	AA	20010726	CA 2001-2397838	20010119

```
     EP 1255831          A2    20021113    EP 2001-903117          20010119
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2003520594       T2    20030708    JP 2001-553824          20010119
     US 2003087375       A1    20030508    US 2002-181642          20020719
     US 2004161824       A1    20040819    US 2004-809654          20040325
     US 2004161825       A1    20040819    US 2004-809655          20040325
PRIORITY APPLN. INFO.:                      US 2000-176885P     P   20000119
                                            WO 2001-US1717      W   20010119
                                            US 2002-181642      A3  20020719
AB   The present invention relates to sperm sp. surface proteins, nucleic acid
     sequences encoding those proteins and antibodies raised against those
     proteins.  Compns. comprising the sperm specific proteins or inhibitors of
     said proteins can be used in contraceptive applications.  Semen samples
     were extracted with Triton X114 and the detergent soluble proteins fractionated
     by 2D gel electrophoresis and the antigenic proteins identified by
     immunoblotting.  Amino acid sequences derived by microsequencing of
     antigens were used to design PCR primers.  The amplification product was
     used as a probe to screen a human testis cDNA library.


=> d his

     (FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

     FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1          291 S SEMINAL PLASMA PROTEIN
L2            2 S SAMP32

=> s antigenic composition
         48199 ANTIGENIC
             6 ANTIGENICS
         48202 ANTIGENIC
                 (ANTIGENIC OR ANTIGENICS)
        634202 COMPOSITION
        285086 COMPOSITIONS
        913753 COMPOSITION
                 (COMPOSITION OR COMPOSITIONS)
       1336083 COMPN
        537383 COMPNS
       1636313 COMPN
                 (COMPN OR COMPNS)
       2074982 COMPOSITION
                 (COMPOSITION OR COMPN)
L3          374 ANTIGENIC COMPOSITION
                 (ANTIGENIC(W)COMPOSITION)

=> s L1 and L3
L4            0 L1 AND L3

=> file medline
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    17.99      18.20

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -1.46      -1.46

FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005

 FILE LAST UPDATED: 30 APR 2005 (20050430/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.
```

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s SAMP32
L5            1 SAMP32

=> d L5 1 ibib,abs

L5   ANSWER 1 OF 1     MEDLINE on STN
ACCESSION NUMBER:    2002134302      MEDLINE
DOCUMENT NUMBER:     PubMed ID: 11870081
TITLE:               SAMP32, a testis-specific, isoantigenic sperm
                     acrosomal membrane-associated protein.
AUTHOR:              Hao Zhonglin; Wolkowicz Michael J; Shetty Jagathpala; Klotz
                     Kenneth; Bolling Laura; Sen Buer; Westbrook V Anne; Coonrod
                     Scott; Flickinger Charles J; Herr John C
CORPORATE SOURCE:    Department of Cell Biology, Center for Research in
                     Contraceptive and Reproductive Health, University of
                     Virginia, Charlottesville, Virginia 22908, USA.
CONTRACT NUMBER:     D43TW/HD00654 (FIC)
     U54HD29099 (NICHD)
SOURCE:              Biology of reproduction, (2002 Mar) 66 (3) 735-44.
                     Journal code: 0207224. ISSN: 0006-3363.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200205
ENTRY DATE:          Entered STN: 20020301
                     Last Updated on STN: 20020530
                     Entered Medline: 20020529
```

AB To identify novel human sperm membrane antigens, we analyzed two-dimensional gels of sperm extracts containing hydrophobic proteins that partitioned into Triton X-114. Four protein spots with isoelectric points (pIs) ranging from 4.5 to 5.5 and apparent molecular weights from 32 to 34 kDa were sequenced by mass spectrometry and found to contain common peptide sequences. Cloning the corresponding cDNA revealed that these protein spots were products of a single gene (**SAMP32**), encoding a protein of 32 kDa with a predicted pI of 4.57. **SAMP32** has a potential transmembrane domain in the carboxyl terminus and is phosphorylated in vivo on serine 256. Northern blotting of eight human tissues and RNA dot blotting of 76 human tissues showed that **SAMP32** expression was testis specific. **SAMP32** contained an amino terminal domain homologous to the major malarial circumsporozoite surface protein and a domain similar to that of Krp1 from Schizosaccharomyces pombe in its carboxyl terminus. The **SAMP32** locus consists of seven exons on chromosome 6q15-16.2. Antiserum against recombinant **SAMP32** recognized protein spots originally cored from a two-dimensional gel. This antiserum strongly stained the equatorial segment and faintly stained the acrosome cap of ejaculated human spermatozoa by immunofluorescence. Immunoelectron microscopy showed that **SAMP32** was associated with the inner acrosomal membrane in

the principal and the equatorial segments of the sperm acrosome. By immunostaining enzyme-dissociated testicular cells, **SAMP32** was localized to Golgi phase round spermatids and subsequent stages of acrosome biogenesis. Recombinant **SAMP32** reacted with serum from an infertile man, suggesting that it is isoantigenic. Antibodies against recombinant **SAMP32** inhibited both the binding and the fusion of human sperm to zona-free hamster eggs.

```
=> d his

     (FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

     FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1          291 S SEMINAL PLASMA PROTEIN
L2            2 S SAMP32
L3          374 S ANTIGENIC COMPOSITION
L4            0 S L1 AND L3

     FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005
L5            1 S SAMP32

=> s antigenic and seminal plasma protein
         47616 ANTIGENIC
             6 ANTIGENICS
         47621 ANTIGENIC
                 (ANTIGENIC OR ANTIGENICS)
         17352 SEMINAL
        474648 PLASMA
          2710 PLASMAS
        475395 PLASMA
                 (PLASMA OR PLASMAS)
       1388587 PROTEIN
       1154217 PROTEINS
       1764154 PROTEIN
                 (PROTEIN OR PROTEINS)
           819 SEMINAL PLASMA PROTEIN
                 (SEMINAL(W)PLASMA(W)PROTEIN)
L6           20 ANTIGENIC AND SEMINAL PLASMA PROTEIN

=> d L6 1-20 ibib,abs

L6   ANSWER 1 OF 20     MEDLINE on STN
ACCESSION NUMBER:    2002322788     MEDLINE
DOCUMENT NUMBER:     PubMed ID: 12065460
TITLE:               Partial characterization of antigenic sperm
                     proteins in foxes (Vulpes vulpes).
AUTHOR:              Verdier Yann; Rouet Nelly; Artois Marc; Boue Franck
CORPORATE SOURCE:    AFSSA Nancy, Unit of Wildlife Health and Management,
                     F-54220 Malzeville, France.
SOURCE:              Journal of andrology, (2002 Jul-Aug) 23 (4) 529-36.
                     Journal code: 8106453. ISSN: 0196-3635.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200208
ENTRY DATE:          Entered STN: 20020615
                     Last Updated on STN: 20020829
                     Entered Medline: 20020827
AB   The aim of this work was to identify antigenic proteins on fox
     spermatozoa. Fox spermatozoa proteins were injected into 3 female rabbits
     and into 3 male and 3 female foxes. In rabbits, a rapid humoral response
     was observed. Using rabbit sera for Western blotting, 23 fox sperm
```

protein bands were recognized between 10 and 110 kd. In foxes, the time course of antibody response was studied in the same manner. The number of recognized bands was maximal on day 75 for 2 foxes, on day 90 for 3 foxes, and on day 120 for 1 fox. Western blot patterns varied from one fox to another. On the whole, 25 protein bands between 10 and 110 kd were recognized. Using fluorescein isothiocyanate (FITC) labeling on fox spermatozoa with rabbit and fox sera, we showed that several antigens recognized by the antisera were located at or near the surface of the spermatozoa. By two-dimensional electrophoresis and gel-purification, we have selected 6 highly **antigenic** proteins with molecular weights of 11.4, 14.7, 16.4, 16.4, 16.8, and 16.9 kd, and isoelectric points of 6.0, 6.0, 6.2, 5.5, 5.3, and 5.8, respectively, and one **antigenic** protein at 97 kd with an isoelectric point of 4.3 to 4.6. The results of this study can be used to characterize these 7 antigens selected more precisely by microsequencing or mass spectrometry.

L6 ANSWER 2 OF 20 MEDLINE on STN
ACCESSION NUMBER: 2001566849 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11673259
TITLE: Exposure of sperm head equatorin after acrosome reaction and its fate after fertilization in mice.
AUTHOR: Manandhar G; Toshimori K
CORPORATE SOURCE: Department of Anatomy and Reproductive Cell Biology, Miyazaki Medical College, Miyazaki 8891692, Japan.
SOURCE: Biology of reproduction, (2001 Nov) 65 (5) 1425-36. Journal code: 0207224. ISSN: 0006-3363.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011024
Last Updated on STN: 20020125
Entered Medline: 20020122

AB Equatorin is a sperm head equatorial protein, possibly involved in sperm-oocyte fusion (Toshimori et al., Biol Reprod 1998; 59:22-29). In the present work, we have shown that equatorin contained in the posterior acrosome is detectable only after spontaneous or induced acrosome reactions following fixation and permeabilization, but not in intact spermatozoa. The presence of protease inhibitors during sonication or ionophore treatments does not inhibit the exposure of the **antigenic** epitope. The zona-penetrated spermatozoa lying in the perivitelline space display equatorin, similar to those of the acrosome-reacted ones. After sperm-egg fusion during in vitro fertilization (IVF), the equatorin dissociates from the sperm head equatorial region and remains at the vicinity of the decondensing male pronuclei. During pronuclear apposition stage, it is pushed away from the pronuclei, possibly by the perinuclear microtubules. After first cleavage, equatorin is inherited by one of the proembryonic cells. The residual equatorin disappears after the second cleavage. Microinjected whole spermatozoa or sperm heads into the MII stage oocytes display equatorin similar to those of the perivitelline sperm. After activation, it dissociates from the sperm nuclei in a similar manner as during IVF. The mode of equatorin degeneration during fertilization is similar to those of the sperm tail components or mitochondria, but different from those of the membrane associated proteins.

L6 ANSWER 3 OF 20 MEDLINE on STN
ACCESSION NUMBER: 2001541257 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11587862
TITLE: A dot-blot-immunoassay for semen identification using a polyclonal antibody against semenogelin, a powerful seminal marker.
AUTHOR: Sato I; Yoshiike M; Yamasaki T; Yoshida K; Takano S; Mukai

T; Iwamoto T
CORPORATE SOURCE: Scientific Crime Laboratory, Kanagawa Prefectural Police Headquarters, Yokohama, Japan.
SOURCE: Forensic science international, (2001 Oct 15) 122 (1) 27-34.
Journal code: 7902034. ISSN: 0379-0738.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011008
Last Updated on STN: 20020122
Entered Medline: 20011204

AB Among various **seminal plasma proteins**, semenogelin (Sg), produced in the seminal vesicle, has been considered a candidate for demonstrating the presence of semen. Sg consists of two proteins, one 52 kDa (Sg-I) in size, and the other a mixture of 71 and 76 kDa proteins (Sg-II). Recombinant Sg-I and Sg-II proteins were obtained using a baculovirus system and then injected into a rabbit to produce the respective antibodies [Characterization of recombinant precursor proteins of the human seminal plasma sperm motility inhibitor synthesized in insect cells, Int. J. Mol. Med. 2 (1998) 693]. When liquefied seminal plasma was immunoblotted with the anti-Sg-I and Sg-II antibodies, the anti-Sg-II antibody identified a wider range of the polypeptides originating from Sg than did the anti-Sg-I antibody. A dot-blot-immunoassay using anti-Sg-II antibody revealed a clear immunoreactive spot even when the semen was diluted 6400-fold. However, this assay showed that the Sg antigen was undetectable in saliva, urine, vaginal secretions, sweat, nasal secretions and serum. To determine the stability of Sg **antigenic** activity, filter paper with dried semen stains were kept at 37, 4 and 22 degrees C for 1, 6 and 18 months, respectively, and the Sg **antigenic** activity was examined. The activity was detectable in an area not less than 0.5 cm x 0.5 cm under all of the above environmental conditions during each period. Finally, semen was mixed with saliva or blood at various volumetric ratios, and used as a source of dried stains. The Sg **antigenic** activity was detectable in the stains until the ratio of semen to saliva or blood reached 1:8. These results suggest that Sg may be useful as a marker for semen identification.

L6 ANSWER 4 OF 20 MEDLINE on STN
ACCESSION NUMBER: 2000199301 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10735126
TITLE: Two-dimensional polyacrylamide gel electrophoresis of equine **seminal plasma proteins** and their correlation with fertility.
AUTHOR: Brandon C I; Heusner G L; Caudle A B; Fayrer-Hosken R A
CORPORATE SOURCE: Department of Large Animal Medicine, College of Veterinary Medicine, University of Georgia, Athens 30602-7385, USA.
SOURCE: Theriogenology, (1999 Oct 1) 52 (5) 863-73.
Journal code: 0421510. ISSN: 0093-691X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000427
Last Updated on STN: 20000427
Entered Medline: 20000419

AB The objectives of this study were to 1) identify proteins found in stallion seminal plasma utilizing two-dimensional polyacrylamide gel electrophoresis (2D-PAGE) in conjunction with Western blot analysis; and 2) to determine if any of these individual proteins were correlated with stallion fertility utilizing regression analysis. Fertility was

quantified by assigning a breeding score for each stallion. Each score was calculated by dividing the number of conceptions by the number of breedings for each stallion for four successive breeding seasons (1992-1995). Ejaculates from stallions of known fertility (n = 6) were collected with a Missouri-style artificial vagina. Immediately after collection, the semen sample was filtered and the gel fraction removed. The resultant sperm-rich fraction was centrifuged in a Beckman Microfuge E at 10,000 x g and the seminal plasma aspirated from the pelleted sperm cells. Two-dimensional PAGE of the seminal plasma was performed under denaturing conditions which revealed that 14 proteins were common in all stallions in the research population. Four of these proteins (SP-1, SP-2, SP-3, and SP-4) were found to be significantly ($P < 0.05$) correlated with the breeding score assigned for each stallion. Regression analysis of protein optical densities with breeding score indicated that SP-1 (72 kDa, pI 5.6) was positively correlated with fertility ($P < 0.05$, $r2 = 0.706$), while SP-2 (75 kDa, pI 6.0), SP-3 (18 kDa, pI 4.3), and SP-4 (16 kDa, pI 6.5) were found to be negatively correlated ($P < 0.05$, $r2 = 0.762$, 0.730, 0.775 respectively) with fertility. Western blot analysis of SP-1 indicated there was an **antigenic** homology with a bovine 55 kDa fertility-associated **seminal plasma protein** identified in a study by Killian et al. (19). This suggests that the two proteins may have a similar physiological role and therefore common biological properties. These results indicate that analysis of stallion **seminal plasma proteins** can be used as an indicator of fertilizing capacity. Identification of such proteins in stallion seminal plasma could lead to better insight into the nature of subfertility or infertility in the horse, as well as to indicate better cryopreservation strategies.

L6 ANSWER 5 OF 20 MEDLINE on STN
ACCESSION NUMBER: 1999272762 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10340997
TITLE: Functionally inactive protein C inhibitor in seminal plasma may be associated with infertility.
AUTHOR: He S; Lin Y L; Liu Y X
CORPORATE SOURCE: Department of Medicine, The Queen Elizabeth Hospital, Birmingham University School of Medicine, Edgbaston, Birmingham B15 2TH, UK.
SOURCE: Molecular human reproduction, (1999 Jun) 5 (6) 513-9. Journal code: 9513710. ISSN: 1360-9947.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199907
ENTRY DATE: Entered STN: 19990730
Last Updated on STN: 20000303
Entered Medline: 19990720

AB Protein C inhibitor (PCI) has been found in seminal plasma and is considered to protect intact surrounding cells and **seminal plasma proteins** from possible proteolytic damage. In the present study, we showed that although the **antigenic** levels of PCI in two seminal plasma samples from patients with infertility were normal or slightly elevated, their inhibitory activities toward urokinase plasminogen activator (uPA) and tissue-type plasminogen activator (tPA) were absent. In contrast, uPA and tPA proteolytic activities in these two samples were 20-60-fold higher than that from normal volunteers. A time-course analysis of PCI-uPA complex formation showed that >80% of the complex had been formed within 15 min in normal seminal plasma in the presence of heparin, compared with the total complex formed after 150 min incubation, whereas no response to heparin stimulation was observed in the assays with the two patient samples. Similarly, >90% of PCI-tPA complex was formed after 30 min of heparin stimulation in normal seminal plasma but no response was observed in the two patient samples. Kinetic assays

of PCI inhibitory function in the presence of activated protein C (APC) showed that PCI inhibitory activity in the two patient samples was absent and not stimulated by heparin. Western blotting also showed that most of the intact PCI molecules, in normal samples, formed complexes with either uPA or tPA but there was no complex formed in one of the two patient samples and very little complex was observed in the other, suggesting that PCI in the two patient samples is inactive. These results suggest that the presence of functionally inactive PCI in seminal plasma may be associated with infertility.

L6 ANSWER 6 OF 20 MEDLINE on STN
ACCESSION NUMBER: 1999150339 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10026171
TITLE: Identification of low density lipoprotein receptor-related protein-2/megalin as an endocytic receptor for seminal vesicle secretory protein II.
AUTHOR: Ranganathan S; Knaak C; Morales C R; Argraves W S
CORPORATE SOURCE: Cell Biology and Anatomy Department, Medical University of South Carolina, Charleston, South Carolina 29425-2204, USA.
CONTRACT NUMBER: DK45598 (NIDDK)
SOURCE: Journal of biological chemistry, (1999 Feb 26) 274 (9) 5557-63.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199903
ENTRY DATE: Entered STN: 19990326
Last Updated on STN: 19990326
Entered Medline: 19990318

AB The low density lipoprotein receptor-related protein-2/megalin (LRP-2) is an endocytic receptor that is expressed on the apical surfaces of epithelial cells lining specific regions of the male and female reproductive tracts. In the present study, immunohistochemical staining revealed that LRP-2 is also expressed by epithelial cells lining the ductal region and the ampulla of the rat seminal vesicle. To identify LRP-2 ligands in the seminal vesicle, we probed seminal vesicle fluid with 125I-labeled LRP-2 in a gel-blot overlay assay. A 100-kDa protein (under non-reducing conditions) was found to bind the radiolabeled receptor. The protein was isolated and subjected to protease digestion, and the proteolytic fragments were subjected to mass spectroscopic sequence analysis. As a result, the 100-kDa protein was identified as the seminal vesicle secretory protein II (SVS-II), a major constituent of the seminal coagulum. Using purified preparations of SVS-II and LRP-2, solid-phase binding assays were used to show that the SVS-II bound to the receptor with high affinity (Kd = 5.6 nM). The binding of SVS-II to LRP-2 was inhibited using a known antagonist of LRP-2 function, the 39-kDa receptor-associated protein RAP. Using a series of recombinant subfragments of SVS-II, the LRP-2 binding site was mapped to a stretch of repeated 13-residue modules located in the central portion of the SVS-II polypeptide. To evaluate the ability of LRP-2 to mediate 125I-SVS-II endocytosis and lysosomal degradation, ligand clearance assays were performed using differentiated mouse F9 cells, which express high levels of LRP-2. Radiolabeled SVS-II was internalized and degraded by the cells, and both processes were inhibited by antibodies to LRP-2 or by RAP. The results indicate that LRP-2 binds SVS-II and can mediate its endocytosis leading to lysosomal degradation.

L6 ANSWER 7 OF 20 MEDLINE on STN
ACCESSION NUMBER: 97460149 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9314574
TITLE: Monoclonal antibodies against boar sperm zona pellucida-binding protein AWN-1. Characterization of a

continuous **antigenic** determinant and immunolocalization of AWN epitopes in inseminated sows.

AUTHOR: Calvete J J; Ensslin M; Mburu J; Iborra A; Martinez P; Adermann K; Waberski D; Sanz L; Topfer-Petersen E; Weitze K F; Einarsson S; Rodriguez-Martinez H

CORPORATE SOURCE: Institut fur Reproduktionsmedizin, Tierarztliche Hochschule, Hannover, Germany.. jcalvete@repro.tiho-hannover.de

SOURCE: Biology of reproduction, (1997 Oct) 57 (4) 735-42.
Journal code: 0207224. ISSN: 0006-3363.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199711

ENTRY DATE: Entered STN: 19971224
Last Updated on STN: 19971224
Entered Medline: 19971121

AB Boar spermadhesin AWN-1 is a sperm surface-associated 14.7-kDa lectin and a major protein of porcine seminal plasma. AWN-1 binds to beta-galactosides and to porcine zona pellucida glycoproteins, suggesting that this protein might play a role in the primary binding of spermatozoa to the egg's external glycoprotein matrix. We have produced a collection of murine monoclonal antibodies against purified AWN-1. Five monoclonal antibodies recognized sequential **antigenic** determinants. All these epitopes were located at the C-terminal region of AWN-1 (residues 109-123) by competitive ELISA using overlapping synthetic peptides that cover the complete 133 amino acid sequence of the lectin. In a structural model of spermadhesin AWN-1, the polypeptide stretch 109-123 is fully solvent-exposed, providing a reasonable explanation for its high immunogenicity. In addition to epitope mapping, we have employed anti-AWN monoclonal antibodies for immunolocalization of the protein in the genital tract of inseminated sows. Clusters of AWN epitopes were occasionally found attached to the epithelium of the uterotubal junction and the adjacent lower isthmus. However, neither AWN-1 nor other **seminal plasma proteins** were found in the isthmic fluid collected 10-26 h after insemination. These results suggest that the whole amount of **seminal plasma proteins** are absorbed by the epithelium of the female genital tract, supporting the claim that removal of seminal plasma components from spermatozoa might be a major event in both in vitro and in vivo sperm capacitation.

L6 ANSWER 8 OF 20 MEDLINE on STN

ACCESSION NUMBER: 97356381 MEDLINE

DOCUMENT NUMBER: PubMed ID: 9212817

TITLE: Immunochemical characterization of a human sperm fibrous sheath protein, its developmental expression pattern, and morphogenetic relationships with actin.

AUTHOR: Escalier D; Gallo J M; Schrevel J

CORPORATE SOURCE: Laboratoire de Biologie de la Reproduction et du Developpement, CHU Bicetre, Le Kremlin Bicetre, France.

SOURCE: journal of histochemistry and cytochemistry : official journal of the Histochemistry Society, (1997 Jul) 45 (7) 909-22.
Journal code: 9815334. ISSN: 0022-1554.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199707

ENTRY DATE: Entered STN: 19970805
Last Updated on STN: 19990129
Entered Medline: 19970724

AB Among the monoclonal antibodies (MAbs) prepared against human sperm

extracts, MAb 4F7 was found to be specific to the human and Macaca fascicularis sperm cytoskeletal fibrous sheath (FS). In Western blotting, MAb 4F7 stains a doublet of polypeptides of about M(r) 95 x 10(3) in extracts of human sperm cells. These polypeptides are not recognized by the KL1 anti-cytokeratin MAb, nor by the MAbs known to bind to the carboxy terminal (IFA) and to the amino terminal (ME101) rod domain of intermediate filaments. Sequential extraction procedures shows that the FS polypeptides recognized by MAb 4F7 are exposed after treatment with 8 M urea 4F7 immunoreactivity is lost after treatment with high ionic solutions (NaCl; KCl, Kl). Immunogold electron microscopy reveals that this protein is present throughout the FS. This FS **antigenic** determinant first accumulates in an FS proximal body in late spermatids, then in granules extending distally along the flagellum. Staining of spermatozoa with flagellar dysgenesis reveals that this FS protein colocalizes with actin no matter what the location of their abnormal assembly. These data suggest that the transient microtubule-like spindle-shaped body of as yet unknown function could be involved in FS protein deposition and that the assembly of the FS and actin could be under the control of some common morphogenetical factor(s). MAb 4F7 should allow further investigations of this peri-axonemal structure in both normal and pathological conditions.

L6 ANSWER 9 OF 20 MEDLINE on STN
ACCESSION NUMBER: 97281768 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9136076
TITLE: Analysis of epitope structure of PSP94 (prostate secretory protein of 94 amino acids): (I). Immuno-dominant and immuno-recessive area.
AUTHOR: Xuan J W; Wu D; Guo Y; Garde S; Baijal-Gupta M; Chin J L
CORPORATE SOURCE: Department of Surgery, University of Western Ontario, London, Canada.
SOURCE: Journal of cellular biochemistry, (1997 May) 65 (2) 172-85. Journal code: 8205768. ISSN: 0730-2312.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199706
ENTRY DATE: Entered STN: 19970630
Last Updated on STN: 19980206
Entered Medline: 19970619

AB PSP94 is a potential biomarker for evaluating patients with prostate carcinoma. We have systematically studied the epitope structure of PSP94 by using a polyclonal antibody against human PSP94. Results of peptide mapping and ELISA tests of dose response to rabbit antiserum against human PSP94 protein showed that only the N-terminal peptides (N30 and M23) are immunoreactive while all the synthetic peptides (C28, C10) located closer to the C-terminus are completely devoid of **antigenic** activity with the polyclonal antibody. These results were confirmed by analysis of reciprocal competitive binding of PSP94 polyclonal antibody by the N-terminal peptides (N30 and M23) v. either recombinant GST-PSP94 fusion protein, purified recombinant PSP94, or natural PSP94 protein. To further delineate the **antigenic** activity of the N- and C-termini, we have also expressed N- and C-terminal half of the whole PSP94 (each 47 peptides) using the E. coli GST expression system. The recombinant N47/C47 peptides were released by thrombin cleavage from the GST fusion protein and characterized by Western blotting experiments. Dose response of the recombinant GST-PSP-N47 and -C47 peptides to PSP94 polyclonal antibody showed differential binding activities. Competitive binding of these recombinant N47/C47 proteins against the GST-PSP94 protein demonstrates that the polyclonal antibody has a higher affinity for the N47 peptide than the C47 peptide. Based on the immunological studies of both synthetic peptides and recombinant PSP94- N/C terminal proteins, we propose an epitope structure of human PSP94 with an immuno-dominant

N-terminus and an immuno-recessive C-terminus.

L6 ANSWER 10 OF 20 MEDLINE on STN
ACCESSION NUMBER: 97046983 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8891904
TITLE: Recombinant PSP94 (prostate secretory protein of 94 amino acids) demonstrates similar linear epitope structure as natural PSP94 protein.
AUTHOR: Xuan J W; Wu D; Guo Y; Fraser J E; Chin J L
CORPORATE SOURCE: Department of Surgery, University of Western Ontario, Canada.. jxuan@julian.uwo.ca
SOURCE: Journal of cellular biochemistry, (1996 Oct) 63 (1) 61-73. Journal code: 8205768. ISSN: 0730-2312.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970306
Last Updated on STN: 19980206
Entered Medline: 19970221

AB PSP94 has the potential to be a useful diagnostic marker and therapeutic agent in prostate cancer. Recently, different immunoassay systems for quantitative analysis of PSP94 in clinical samples have been developed, but the epitope structure of PSP94 protein has not been elucidated. In this study, we report an Escherichia coli expression system for recombinant GST-PSP94 fusion protein. GST-PSP94 contains **antigenic** determinants similar to natural PSP94 protein (determined both by Western blotting experiments and by ELISA) and can be used to study the structure of natural PSP94 antigen. Since GST-PSP94 was expressed in E. coli and purification involved a denaturing process, we propose that the epitope structure of PSP94 is linear and largely dependent on the primary amino acid sequence, rather than conformational structure. This hypothesis was supported by reciprocal competition in ELISA among natural, GST-PSP94 fusion protein, and purified recombinant PSP94 protein. The results demonstrate that the various forms of PSP94 can compete with each other in binding to rabbit PSP94 polyclonal antibody, although the natural PSP94 has a slightly higher affinity. When natural and recombinant PSP94 protein were denatured in vitro with urea and alkali, no effect on the binding to antibody was found. The epitope activity of natural PSP94 was also shown to be resistant to the treatment of detergent and reducing agent. The location of one of the linear epitopes recognized by the PSP94 antibody was determined to be in the N-terminus by using two synthetic peptides representing N- and C-terminal sequences. Competitive ELISA between the N-terminal peptide and PSP94 protein indicate that both natural and GST-PSP94 have similar immunoactive N-termini.

L6 ANSWER 11 OF 20 MEDLINE on STN
ACCESSION NUMBER: 93272821 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8500528
TITLE: Membrane cofactor protein (MCP, CD46) in seminal plasma and on spermatozoa in normal and "sterile" subjects.
AUTHOR: Seya T; Hara T; Matsumoto M; Kiyohara H; Nakanishi I; Kinouchi T; Okabe M; Shimizu A; Akedo H
CORPORATE SOURCE: Department of Immunology, Center for Adult Diseases Osaka, Japan.
SOURCE: European journal of immunology, (1993 Jun) 23 (6) 1322-7. Journal code: 1273201. ISSN: 0014-2980.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199307

ENTRY DATE: Entered STN: 19930716
Last Updated on STN: 19980206
Entered Medline: 19930701

AB A sperm protein of molecular mass 43 kDa (the spermatozoa membrane cofactor protein, smMCP) and a **seminal plasma protein** of 60 kDa (ssMCP) were identified by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) followed by immunoblotting with four monoclonal antibodies (mAb) against membrane cofactor protein (MCP, CD46). These proteins served as factor I cofactors for the cleavage of methylamine-treated C3 (C3ma), the activity of which was blocked by M75, an MCP cofactor-activity-blocking mAb. Thus, these semen proteins are **antigenic** and functional homologous of MCP. On SDS-PAGE analysis these MCP migrated as single-band proteins which differed from the two-band forms of MCP expressed on other cells. smMCP was N-glycosylated but not O-glycosylated, while ssMCP was O-glycosylated: after deglycosylation of these proteins bands were detected at 38-40 kDa and 43 kDa on SDS-PAGE, respectively. These semen MCP are therefore, structurally different from the conventional MCP. ssMCP in both normal and "sterile" subject groups was determined by sandwich enzyme-linked immunosorbent assay. Seminal plasma in the two groups contained 250-700 ng/ml ssMCP. The difference between the two groups was marginal, although samples from normal subjects tended to show higher concentrations of ssMCP than samples from "sterile" subjects. No molecular difference was observed with ssMCP and smMCP in the two groups by SDS-PAGE/immunoblotting analysis. Immunohistochemical analysis suggested that MCP was positive in glandular epithelial cells and the lumen of the prostate, and in most intra-lumen cells of the testis. Using antibody M177, solubilized prostate and testis were analyzed by immunoblotting and compared with other cell MCP. The major band of MCP in the testis, but not in the prostate, was of 60 kDa, which aligned with ssMCP. No band of testis or prostate MCP, however, aligned with smMCP. ssMCP may be produced in the testis, while the origin of smMCP remains unknown. We hypothesize that ssMCP is important in the survival of spermatozoa, protecting them against local secretion of immunoglobulin and complement in the female genital tract, and that smMCP, which is expressed on acrosome-reacted spermatozoa, plays an essential role in the interaction of spermatozoa with oocytes.

L6 ANSWER 12 OF 20 MEDLINE on STN
ACCESSION NUMBER: 92001567 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1911414
TITLE: Production and characterization of a monoclonal antibody to ABH-carrying alpha 2-seminoglycoprotein for ABO grouping of semen by ELISA.
AUTHOR: Kishida T; Tamaki Y; Tsuda R; Narahara H; Katsumata Y; Kimura H
CORPORATE SOURCE: Department of Forensic Medicine, Medical College of Oita, Japan.
SOURCE: International journal of legal medicine, (1991) 104 (3) 149-52.
Journal code: 9101456. ISSN: 0937-9827.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199111
ENTRY DATE: Entered STN: 19920124
Last Updated on STN: 19920124
Entered Medline: 19911108

AB BALB/c mice were immunized with alpha 2-seminoglycoprotein (A2SGP), the lymph node cells were fused with P3U1 myeloma cells and cultured by the conventional technique. Four antibody-producing hybridoma clones were established and antibody-containing ascitic fluid obtained. The antibody was directed to the protein backbone of A2SGP and not to ABH **antigenic** determinants and did not cross-react with saliva or

vaginal secretions. When tested in an indirect ELISA the anti-A2SGP antibody had a titer of 512000. The anti-A2SGP was used in a capture ELISA (or sandwich ELISA) in which wells were coated with this antibody to capture A2SGP in semen, and the captured A2SGP was detected with anti-A, anti-B or anti-H-peroxidase conjugate and peroxidase-labeled second antibody. This ELISA allowed correct ABO grouping even of 1:12,800 or higher dilutions of semen. When the ELISA was applied to ABO grouping of seminal fluids mixed with vaginal secretions only the seminal ABH antigens could be detected. The results strongly suggest the potential usefulness of monoclonal anti-A2SGP in the investigation of rape cases.

L6 ANSWER 13 OF 20 MEDLINE on STN
ACCESSION NUMBER: 91177609 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1706684
TITLE: Electrophoretic pattern of rodent seminal vesicle proteins as revealed by silver staining.
AUTHOR: Carballada R; Esponda P
CORPORATE SOURCE: Centro de Investigaciones Biologicas, CSIC, Madrid, Spain.
SOURCE: International journal of andrology, (1991 Feb) 14 (1) 52-7. Journal code: 8000141. ISSN: 0105-6263.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199104
ENTRY DATE: Entered STN: 19910519
Last Updated on STN: 19970203
Entered Medline: 19910429

AB Electrophoresis of seminal vesicle secretions (SVS) from several rodents showed a very simple pattern composed of 3-5 main protein bands when an anionic dye (Coomassie brilliant blue) was used. However, use of a silver staining method showed a more complex protein spectrum, and several minor components of 12-90 kD, were clearly revealed. Western blotting using antibodies to SVS demonstrated that these minor protein components were not serum contaminants. Rat, mouse and hamster SVS shared **antigenic** determinants which were not related to rabbit SVS.

L6 ANSWER 14 OF 20 MEDLINE on STN
ACCESSION NUMBER: 90230218 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1691787
TITLE: Monoclonal antibody recognizing an apparent peptide epitope of human seminal plasma glycoprotein and exhibiting sperm immobilizing activity.
AUTHOR: Batova I; Kameda K; Hasegawa A; Koyama K; Tsuji Y; Isojima S
CORPORATE SOURCE: Department of Obstetrics and Gynecology, Hyogo Medical College, Nishinomiya, Japan.
SOURCE: Journal of reproductive immunology, (1990 Mar) 17 (1) 1-16. Journal code: 8001906. ISSN: 0165-0378.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199005
ENTRY DATE: Entered STN: 19900706
Last Updated on STN: 19960129
Entered Medline: 19900529

AB A hybridoma (3B2-F7) has been established which secretes a monoclonal antibody (Mab) directed against a peptide determinant of human seminal plasma glycoprotein (HSP-gP). The deglycosylation of HSP-gP was performed chemically with TFMS hydrolysis and enzymatically in the presence of detergent and further treated with periodic acid after fixing deglycosylated HSP on plastic wells. The Mab 3B2-F7 (IgM, kappa) exhibited sperm immobilization activity (256 units of SI50) and inhibited

sperm binding to human zona pellucida. Human epididymis, pancreatic islets of Langerhan's and distal tubulus of kidney were strongly labelled whilst other tissues were essentially negative by avidin-biotin complex tissue staining with this Mab. The antigen epitope to the Mab was in the 36 kDa molecule of human HSP-gP. The **antigenic** determinant recognized by Mab 3B2-F7 was destroyed by six different proteases, but was resistant to N-glycanase and other carbohydrate splitting enzymes. This epitope is therefore likely to be composed of a polypeptide chain. Peptide fragments after proteolysis of the HSP molecule with Staph. aureus V8 protease and trypsin retained antigenicity, hence the epitope corresponding to the Mab may be a peptide chain and not dependent on the conformational structure of the polypeptide.

L6 ANSWER 15 OF 20 MEDLINE on STN
ACCESSION NUMBER: 90077927 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2512274
TITLE: Identification of a potential FSH modulatory protein in human testis and seminal plasma.
AUTHOR: Sluss P M; Schneyer A L; Cockett A T; Cromie W J
CORPORATE SOURCE: Department of Urology, University of Rochester Medical Center, New York 14642.
CONTRACT NUMBER: HD 19302 (NICHD)
SOURCE: Journal of andrology, (1989 Sep-Oct) 10 (5) 386-92. Journal code: 8106453. ISSN: 0196-3635.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199001
ENTRY DATE: Entered STN: 19900328
Last Updated on STN: 19970203
Entered Medline: 19900125

AB A variety of factors capable of inhibiting the in vitro binding of FSH to its receptor have been identified in gonadal tissues from males and females. Interest in these factors has been stimulated because of their potential role as local modulators of gonadotropin action. Studies reported here were undertaken to determine if proteins having **antigenic** homologies with human FSH or an "FSH-like" protein isolated from porcine follicular fluid were present in human testicular tissue or seminal plasma. Polyclonal antibodies were generated against fractions of porcine follicular fluid containing FSH receptor binding inhibitory activity, FSH agonist activity in vitro, and a 58,000 Mr protein recognized by human FSH antiserum. Antiserum against this fraction of porcine follicular fluid and antiserum against human FSH were used to probe Western blots of proteins from human testis homogenates or seminal plasma. A 58,000 Mr protein was identified in both human testis extract and seminal plasma. This protein appears to be related antigenically to both human FSH and the 58,000 Mr "FSH-like" protein in porcine follicular fluid. It does not appear to be a metabolic degradatory product of human FSH since the protein is larger than FSH, does not dissociate into subunits under reducing conditions and is recognized by the antiserum to FSH-like protein that does not recognize human FSH. These data identify a 58,000 Mr protein in human testis and seminal plasma that may represent a local modulator of FSH action in the testis.

L6 ANSWER 16 OF 20 MEDLINE on STN
ACCESSION NUMBER: 89316795 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2473499
TITLE: A ram epididymal secretory protein shares common **antigenic** determinants with rat epididymal proteins and human **seminal plasma proteins**.
AUTHOR: Fournier-Delpech S; Holland M K; Skudlarek M D; Rankin T L;

Orgebin-Crist M C; Courot M
CORPORATE SOURCE: I.N.R.A., Station de Physiologie de la Reproduction, Nouzilly, France.
CONTRACT NUMBER: HD03820 (NICHD)
HD05797 (NICHD)
SOURCE: Reproduction, nutrition, development, (1988) 28 (5) 1283-99.
Journal code: 8005903. ISSN: 0181-1916.
PUB. COUNTRY: France
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19970203
Entered Medline: 19890811

L6 ANSWER 17 OF 20 MEDLINE on STN
ACCESSION NUMBER: 89210897 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3243284
TITLE: Detection of sperm-coating antigens immunologically related to a seminal protein in rat.
AUTHOR: Manco G; Sansone G; Cotugno M; Abrescia P
CORPORATE SOURCE: Department of General and Environmental Physiology, University of Naples, Italy.
SOURCE: European journal of cell biology, (1988 Dec) 47 (2) 270-4.
Journal code: 7906240. ISSN: 0171-9335.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198906
ENTRY DATE: Entered STN: 19900306
Last Updated on STN: 19900306
Entered Medline: 19890602
AB We report in this paper that proteins from the surface of ejaculated spermatozoa contain **antigenic** determinants cross-reacting with a rabbit antiserum raised against native CFS, a protein secreted from the rat seminal vesicle and composed of two subunits, namely RSV IV and RSV V. Conversely, no such proteins could be extracted from cauda epididymal spermatozoa. The cross-reacting proteins derived from the ejaculated spermatozoa were analyzed by SDS-PAGE. An electrophoretic pattern different than that expected for native CFS in denaturing conditions was found. In vitro reconstitution experiments showed that labeled native CFS is able to bind cauda epididymal spermatozoa. The CFS protein recovered from the sperm surface was examined and alterations of its structure were also noted. The sperm-coating abilities of CFS and of its RSV IV subunit are discussed.

L6 ANSWER 18 OF 20 MEDLINE on STN
ACCESSION NUMBER: 89012582 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3172554
TITLE: Immunochemical analysis of beta-seminoprotein (beta-Sm) as a major **antigenic** substance in seminal fluids--forensic immunological studies of body fluids and secretions, Report 34.
AUTHOR: Tsuda R; Ito Y; Hara M
SOURCE: Nippon hoigaku zasshi. Japanese journal of legal medicine, (1988 Apr) 42 (2) 147-53.
Journal code: 0413715. ISSN: 0047-1887.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Japanese
FILE SEGMENT: Priority Journals

ENTRY MONTH: 198811
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19900308
Entered Medline: 19881107

L6 ANSWER 19 OF 20 MEDLINE on STN
ACCESSION NUMBER: 68399023 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4233778
TITLE: Physico-chemical and **antigenic** characterization of human **seminal plasma proteins**. II. Biochemical characterization of the trichloroacetic acid soluble component of human seminal plasma.
AUTHOR: Kalelkar Y M; Gunaga K P; Sheth A R; Rao S S
SOURCE: Indian journal of biochemistry, (1967 Jun) 4 (2) 100-2.
Journal code: 1306642. ISSN: 0019-5081.
PUB. COUNTRY: India
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 196810
ENTRY DATE: Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19681024

L6 ANSWER 20 OF 20 MEDLINE on STN
ACCESSION NUMBER: 67240435 MEDLINE
DOCUMENT NUMBER: PubMed ID: 4166932
TITLE: Physico-chemical & **antigenic** characterization of human **seminal plasma proteins** : gamma globulins of human seminal plasma.
AUTHOR: Acharya U S; Gunaga K P; Rao S S
SOURCE: Indian journal of biochemistry, (1966 Sep) 3 (3) 208-10.
Journal code: 1306642. ISSN: 0019-5081.
PUB. COUNTRY: India
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 196710
ENTRY DATE: Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19671028

=> d his

(FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1 291 S SEMINAL PLASMA PROTEIN
L2 2 S SAMP32
L3 374 S ANTIGENIC COMPOSITION
L4 0 S L1 AND L3

FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005
L5 1 S SAMP32
L6 20 S ANTIGENIC AND SEMINAL PLASMA PROTEIN

=> s antigenic composition
47616 ANTIGENIC
6 ANTIGENICS
47621 ANTIGENIC
(ANTIGENIC OR ANTIGENICS)
146743 COMPOSITION

```
         10899 COMPOSITIONS
        154065 COMPOSITION
                 (COMPOSITION OR COMPOSITIONS)
L7         446 ANTIGENIC COMPOSITION
                 (ANTIGENIC(W)COMPOSITION)

=> s L7 and L1
         17352 SEMINAL
        474648 PLASMA
          2710 PLASMAS
        475395 PLASMA
                 (PLASMA OR PLASMAS)
       1388587 PROTEIN
       1154217 PROTEINS
       1764154 PROTEIN
                 (PROTEIN OR PROTEINS)
           819 SEMINAL PLASMA PROTEIN
                 (SEMINAL(W)PLASMA(W)PROTEIN)
L8           0 L7 AND L1

=> d his

     (FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

     FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1         291 S SEMINAL PLASMA PROTEIN
L2           2 S SAMP32
L3         374 S ANTIGENIC COMPOSITION
L4           0 S L1 AND L3

     FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005
L5           1 S SAMP32
L6          20 S ANTIGENIC AND SEMINAL PLASMA PROTEIN
L7         446 S ANTIGENIC COMPOSITION
L8           0 S L7 AND L1

=> s isoantigens
L9        8281 ISOANTIGENS

=> s L1 and L9
         17352 SEMINAL
        474648 PLASMA
          2710 PLASMAS
        475395 PLASMA
                 (PLASMA OR PLASMAS)
       1388587 PROTEIN
       1154217 PROTEINS
       1764154 PROTEIN
                 (PROTEIN OR PROTEINS)
           819 SEMINAL PLASMA PROTEIN
                 (SEMINAL(W)PLASMA(W)PROTEIN)
L10          7 L1 AND L9

=> d L10 1-7 ibib,abs

L10  ANSWER 1 OF 7     MEDLINE on STN
ACCESSION NUMBER:   2004505511     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 15475442
TITLE:              The spermatozoa protein, SLLP1, is a novel cancer-testis
                    antigen in hematologic malignancies.
AUTHOR:             Wang Zhiqing; Zhang Yana; Mandal Arabinda; Zhang Jian;
                    Giles Francis J; Herr John C; Lim Seah H
CORPORATE SOURCE:   Division of Hematology and Oncology, Texas Tech University
                    Health Sciences Center, Amarillo, Texas 79106, USA.
```

CONTRACT NUMBER: D43 HD00654 (NICHD)
R01 CA106283 (NCI)
R01 CA88434 (NCI)
R01 HD35523 (NICHD)
U54-HD29099 (NICHD)
SOURCE: Clinical cancer research : an official journal of the American Association for Cancer Research, (2004 Oct 1) 10 (19) 6544-50.
Journal code: 9502500. ISSN: 1078-0432.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200503
ENTRY DATE: Entered STN: 20041013
Last Updated on STN: 20050330
Entered Medline: 20050329

AB PURPOSE: Neoplastic cells often aberrantly express normal testicular proteins. Because these proteins have a very restricted normal tissue expression, they may be suitable targets for immunotherapy. SLLP1 is an intra-acrosomal, nonbacteriolytic, c lysozyme-like protein recently isolated from human spermatozoa. In this study, we determined whether SLLP1 is a novel cancer-testis antigen in hematologic malignancies EXPERIMENTAL DESIGN: SLLP1 expression in hematologic tumor cells and normal tissues was determined using a combination of reverse transcription-PCR, real-time PCR, and Western blot analysis. The presence of antibodies against SLLP1 was determined by ELISA analysis. RESULTS: SLLP1 was aberrantly expressed in the tumor cells from 2 of 9 acute myeloid leukemia, 3 of 11 chronic lymphocytic leukemia, 4 of 14 chronic myeloid leukemia, and 6 of 17 multiple myeloma. In contrast, they were not detected in corresponding specimens from any healthy donors. SLLP1 exhibited a very restricted normal tissue expression, being found only in testis/spermatozoa. SLLP1 was expressed in some tumor cells at a level of >25%. High titer IgG antibodies against SLLP1 were also detected in the sera of some of these patients. CONCLUSIONS: SLLP1 is a novel cancer-testis antigen in hematologic malignancies and is capable of eliciting B-cell immune responses in vivo in cancer-bearing individuals. Our results, therefore, support SLLP1 as a protein target appropriate for additional in vitro study to define its suitability for immunotherapy.

L10 ANSWER 2 OF 7 MEDLINE on STN
ACCESSION NUMBER: 2004224055 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15035665
TITLE: Identification of sperm immunoreactive antigens for immunocontraceptive purposes: a review.
AUTHOR: Domagala Alina; Kurpisz Maciej
CORPORATE SOURCE: Institute of Human Genetics, Polish Academy of Sciences, Poznan, Poland.. aldom@man.poznan.pl
SOURCE: Reproductive biology and endocrinology [electronic resource] : RB&E, (2004 Mar 18) 2 (1) 11. Electronic Publication: 2004-03-18. Ref: 53
Journal code: 101153627. ISSN: 1477-7827.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200501
ENTRY DATE: Entered STN: 20040505
Last Updated on STN: 20050122
Entered Medline: 20050121

AB Antisperm antibodies (ASA) may be a reason of infertility in some individuals. They may affect pre- as well as post-fertilization stages of

the reproductive process. There is ongoing progress in the identification of sperm antigens related to fertilization. The employed methods for this purpose include recombinant DNA technology and the most advanced proteomic analysis. This paper enlists the different approaches undertaken in order to identify and characterize the immunoreactive sperm antigens. We have mainly focused on those, which have been already studied in regard of their immunocontraceptive potential, although it has been impossible to include all published data concerning the topic in a single article. Few novel sperm auto- and **isoantigens**, discovered recently, have also been reviewed even if their role in fertilization has not been yet established.

L10 ANSWER 3 OF 7 MEDLINE on STN
ACCESSION NUMBER: 2004046271 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14747161
TITLE: SPRASA, a novel sperm protein involved in immune-mediated infertility.
AUTHOR: Chiu W W C; Erikson E K L; Sole C A; Shelling A N; Chamley L W
CORPORATE SOURCE: Department of Obstetrics and Gynaecology, University of Auckland, Auckland, New Zealand.
SOURCE: Human reproduction (Oxford, England), (2004 Feb) 19 (2) 243-9.
Journal code: 8701199. ISSN: 0268-1161.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200409
ENTRY DATE: Entered STN: 20040129
Last Updated on STN: 20040925
Entered Medline: 20040924

AB BACKGROUND: Antisperm antibodies (ASA) may be an important cause of infertility, but current tests for the detection of ASA have poor prognostic value. Identification of the sperm proteins that ASA bind to may aid the development of more useful diagnostic tests. METHODS: One- and two-dimensional PAGE and western blotting analyses, as well as amino acid sequencing, were used to identify a novel sperm protein reactive with ASA (SPRASA) from infertile men. An antiserum reactive with SPRASA was produced by immunizing a rabbit with SPRASA excised from two-dimensional gels. This antiserum was used to demonstrate the localization of SPRASA on the sperm. RESULTS: Amino acid sequences derived from SPRASA matched those of a theoretical protein, XP-085564. This protein is derived from the C-type lysozyme/alpha-lactalbumin gene family. Immunohisto chemistry indicates that SPRASA is localized to the acrosome. Western blot analysis revealed that 50 unselected individuals did not have antibodies that reacted with SPRASA. CONCLUSION: Only ASA from infertile men react with SPRASA, suggesting that this novel protein may be important in the processes of fertility. The identification of SPRASA as the antigen for infertility-associated ASA raises the possibility of developing first, antigen-specific tests for ASA, and secondly, more targeted treatment for immune-mediated infertility.

L10 ANSWER 4 OF 7 MEDLINE on STN
ACCESSION NUMBER: 2003187539 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12606493
TITLE: SLLP1, a unique, intra-acrosomal, non-bacteriolytic, c lysozyme-like protein of human spermatozoa.
AUTHOR: Mandal Arabinda; Klotz Kenneth L; Shetty Jagathpala; Jayes Friederike L; Wolkowicz Michael J; Bolling Laura C; Coonrod Scott A; Black Michael B; Diekman Alan B; Haystead Timothy A J; Flickinger Charles J; Herr John C
CORPORATE SOURCE: Center for Research in Contraceptive and Reproductive Health, Department of Cell Biology, University of Virginia,

Charlottesville 22908, USA.
CONTRACT NUMBER: D43 TW/HD 00654 (FIC)
HD U54 29099 (NICHD)
P30 28934
SOURCE: Biology of reproduction, (2003 May) 68 (5) 1525-37.
Electronic Publication: 2002-11-27.
Journal code: 0207224. ISSN: 0006-3363.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200312
ENTRY DATE: Entered STN: 20030423
Last Updated on STN: 20031217
Entered Medline: 20031212

AB We report the presence of a unique, non-bacteriolytic, c (chicken or conventional type) lysozyme-like protein, SLLP1, in the acrosome of human sperm. C lysozymes are bacteriolytic and can also bind to N-acetylglucosamines linked by beta-1,4 glycosidic bonds. Most of the invariant residues (17 out of 20), including all the cysteines, were conserved in SLLP1, but the two catalytic residues E35 and D52 of c lysozymes were replaced with T and N, respectively. The full-length cDNA encodes a protein of 215 aa with a predicted protease cleavage site between A87 and K88. The processed form of SLLP1, which showed an exon-intron organization similar to human c lysozyme, was the major isoform in the acrosome of ejaculated sperm. As expected, based on its sequence, the mature protein secreted from yeast showed no bacteriolytic activity. A significant decrease (54%, P < or = 0.001) in the number of sperm bound to zona-free hamster eggs was observed in the presence of antisera to recombinant SLLP1. SLLP1 mRNA (size, approximately 1 kb) appeared to be expressed only in the testis and in the Burkitt lymphoma Raji cell line. The gene SPACA3 encodes SLLP1 and contains five exons at locus 17q11.2. Because of its typical c lysozyme-like sequence, genomic organization, conservation of putative substrate-binding sites even in the absence of catalytic residues, and localization in the acrosomal matrix, we hypothesize that, after acrosome reaction, SLLP1 could be a potential receptor for the egg oligosaccharide residue N-acetylglucosamine, which is present in the extracellular matrix over the egg plasma membrane, within the perivitelline space, pores of zona pellucida, and cumulus layers.

L10 ANSWER 5 OF 7 MEDLINE on STN
ACCESSION NUMBER: 2002134302 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11870081
TITLE: SAMP32, a testis-specific, isoantigenic sperm acrosomal membrane-associated protein.
AUTHOR: Hao Zhonglin; Wolkowicz Michael J; Shetty Jagathpala; Klotz Kenneth; Bolling Laura; Sen Buer; Westbrook V Anne; Coonrod Scott; Flickinger Charles J; Herr John C
CORPORATE SOURCE: Department of Cell Biology, Center for Research in Contraceptive and Reproductive Health, University of Virginia, Charlottesville, Virginia 22908, USA.
CONTRACT NUMBER: D43TW/HD00654 (FIC)
U54HD29099 (NICHD)
SOURCE: Biology of reproduction, (2002 Mar) 66 (3) 735-44.
Journal code: 0207224. ISSN: 0006-3363.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20020301
Last Updated on STN: 20020530
Entered Medline: 20020529

AB To identify novel human sperm membrane antigens, we analyzed

two-dimensional gels of sperm extracts containing hydrophobic proteins that partitioned into Triton X-114. Four protein spots with isoelectric points (pIs) ranging from 4.5 to 5.5 and apparent molecular weights from 32 to 34 kDa were sequenced by mass spectrometry and found to contain common peptide sequences. Cloning the corresponding cDNA revealed that these protein spots were products of a single gene (SAMP32), encoding a protein of 32 kDa with a predicted pI of 4.57. SAMP32 has a potential transmembrane domain in the carboxyl terminus and is phosphorylated in vivo on serine 256. Northern blotting of eight human tissues and RNA dot blotting of 76 human tissues showed that SAMP32 expression was testis specific. SAMP32 contained an amino terminal domain homologous to the major malarial circumsporozoite surface protein and a domain similar to that of Krp1 from Schizosaccharomyces pombe in its carboxyl terminus. The SAMP32 locus consists of seven exons on chromosome 6q15-16.2. Antiserum against recombinant SAMP32 recognized protein spots originally cored from a two-dimensional gel. This antiserum strongly stained the equatorial segment and faintly stained the acrosome cap of ejaculated human spermatozoa by immunofluorescence. Immunoelectron microscopy showed that SAMP32 was associated with the inner acrosomal membrane in the principal and the equatorial segments of the sperm acrosome. By immunostaining enzyme-dissociated testicular cells, SAMP32 was localized to Golgi phase round spermatids and subsequent stages of acrosome biogenesis. Recombinant SAMP32 reacted with serum from an infertile man, suggesting that it is isoantigenic. Antibodies against recombinant SAMP32 inhibited both the binding and the fusion of human sperm to zona-free hamster eggs.

L10 ANSWER 6 OF 7 MEDLINE on STN
ACCESSION NUMBER: 94142160 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8309099
TITLE: Medico-legal studies on detection of organ-specific antigens.
AUTHOR: Takahama K
CORPORATE SOURCE: Department of Legal Medicine, Miyazaki Medical College.
SOURCE: Nippon hoigaku zasshi. Japanese journal of legal medicine, (1993 Dec) 47 (6) 445-55.
Journal code: 0413715. ISSN: 0047-1887.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Japanese
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199403
ENTRY DATE: Entered STN: 19940330
Last Updated on STN: 19970203
Entered Medline: 19940315

AB When the organs have been injured, specific antigens pertaining to the organs could be expected to be released into the circulation and/or adhere to the weapons which has inflicted the damage to the organs. We could thus be able to identify the injured organs, if we could detect the antigens specific to the organs in blood of the victim and/or in bloodstains left on the weapons. 1. Liver-specific antigen (LSA). The liver-specific antigen (LSA) was purified from the human liver and was showed to have a molecular mass of 52 kDa and pI of 5.8-5.9. Anti-human LSA antibody only reacted with the liver extract using immuno-dot-blotting technique, and depending on the immunohistochemistry, this antigen was located within the cytoplasm of hepatocytes. The human LSA was proved to be a novel protein, isolated from the human liver, by the NH2-terminal amino acid sequence analysis. Anti-human LSA Fab'-peroxidase conjugate was prepared and a highly sensitive and specific sandwich enzyme immunoassay for human LSA was developed. The detection limit of this assay was 0.52 pg/tube. The LSA levels in the serum and blood of cadavers with liver injuries were markedly increased. These findings suggest that the human LSA will become a useful marker for detecting liver injury. 2. Sucrase-Isomaltase (SI). A sandwich enzyme immunoassay for SI, a dimeric digestive enzyme, was developed using pig as a model animal.

SDS-solubilized proteins from the small intestine contained at least 50-fold larger SI than those from the other organs. Significant amount of SI could be detected in small intestinal contents and in stains left on the knife which had been stabbed into the small intestine. These results suggested that SI was a possible forensic marker for small intestinal injuries, although human SI remained to be examined. 3. Cardiac Troponin I (cTnI). The purpose of our study is to identify injuries to the heart from a small amount of blood quickly and accurately by using a sensitive enzyme immunoassay for cardiac troponin I (cTnI), a heart specific protein. Accordingly we purified cTnI from bovine cardiac muscle and prepared the antibody against cTnI in order to develop this assay. We furthermore investigated the usefulness of this antibody by immuno-dot-blotting. As the result, it was confirmed that this antibody reacted against only heart. 4. Dystrophin. The purpose of this work is to develop a method to determine skeletal muscle injuries using muscle-specific substances. Dystrophin was purified from SDS-solubilized bovine skeletal muscle.

L10 ANSWER 7 OF 7 MEDLINE on STN
ACCESSION NUMBER: 91174557 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2078059
TITLE: Cellular sensitization against spermatic and seminal plasma antigens in women after intrauterine insemination.
AUTHOR: Schroder W; Mallmann P; van der Ven H; Diedrich K; Krebs D
CORPORATE SOURCE: Department of Obstetrics and Gynecology, University of Bonn, FRG.
SOURCE: Archives of gynecology and obstetrics, (1990) 248 (2) 67-74.
Journal code: 8710213. ISSN: 0932-0067.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199104
ENTRY DATE: Entered STN: 19910512
Last Updated on STN: 19910512
Entered Medline: 19910419

AB Using an indirect lymphokine-assay, the leucocyte-migration-inhibition-test (LMI-test), the cellular sensitization of fertile and infertile patients before and after homologous and heterologous intrauterine insemination (IUI) was investigated. In this assay several preparations of spermatozoa ("washed"-, "swim-up"- and "pellet"-spermatozoa) in different concentrations (1, 5 and 10 x 10(6) sperms/ml culture medium) and seminal plasma were tested as antigen. In all investigated groups a cellular immune response against spermatic antigen was demonstrable and seemed to be dose dependent. In contrast to fertile women who reacted with an enhancement of the macrophage migration for low concentrations the same concentration of antigen induced an inhibition of macrophage migration in fertile patients. For high concentrations of spermatic antigens there was a difference in the intensity of cell-mediated immune response between fertile and infertile women. Since infertile patients demonstrated an increased level of cell-mediated immune response it is possible that infertility may be caused by this altered immunological reaction. This response changes after multiple IUI-treatment and that change might be caused by the high concentration of spermatic antigens as there was a difference in the intensity of cell-mediated immune response between fertile and infertile women. Since infertile patients demonstrated an increased level of cell-mediated immune response it is possible that infertility may be caused by this altered immunological reaction. This response changes after multiple IUI-treatment and that change might be caused by the high concentration of spermatozoa. The immunological response of infertile patients seems to be similar in those receiving husband and donor IUI.

```
=> d his

     (FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

     FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1           291 S SEMINAL PLASMA PROTEIN
L2             2 S SAMP32
L3           374 S ANTIGENIC COMPOSITION
L4             0 S L1 AND L3

     FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005
L5             1 S SAMP32
L6            20 S ANTIGENIC AND SEMINAL PLASMA PROTEIN
L7           446 S ANTIGENIC COMPOSITION
L8             0 S L7 AND L1
L9          8281 S ISOANTIGENS
L10            7 S L1 AND L9

=> s sperm acrosome associated 1 protein
         41931 SPERM
           730 SPERMS
         42182 SPERM
                 (SPERM OR SPERMS)
          4790 ACROSOME
           498 ACROSOMES
          4941 ACROSOME
                 (ACROSOME OR ACROSOMES)
       1089131 ASSOCIATED
             2 ASSOCIATEDS
       1089131 ASSOCIATED
                 (ASSOCIATED OR ASSOCIATEDS)
       3462028 1
       1388587 PROTEIN
       1154217 PROTEINS
       1764154 PROTEIN
                 (PROTEIN OR PROTEINS)
L11            0 SPERM ACROSOME ASSOCIATED 1 PROTEIN
                 (SPERM(W)ACROSOME(W)ASSOCIATED(W)1(W)PROTEIN)

=> s sperm acrosome protein
         41931 SPERM
           730 SPERMS
         42182 SPERM
                 (SPERM OR SPERMS)
          4790 ACROSOME
           498 ACROSOMES
          4941 ACROSOME
                 (ACROSOME OR ACROSOMES)
       1388587 PROTEIN
       1154217 PROTEINS
       1764154 PROTEIN
                 (PROTEIN OR PROTEINS)
L12            0 SPERM ACROSOME PROTEIN
                 (SPERM(W)ACROSOME(W)PROTEIN)

=> d his

     (FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

     FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1           291 S SEMINAL PLASMA PROTEIN
L2             2 S SAMP32
L3           374 S ANTIGENIC COMPOSITION
```

```
L4             0 S L1 AND L3

     FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005
L5             1 S SAMP32
L6            20 S ANTIGENIC AND SEMINAL PLASMA PROTEIN
L7           446 S ANTIGENIC COMPOSITION
L8             0 S L7 AND L1
L9          8281 S ISOANTIGENS
L10            7 S L1 AND L9
L11            0 S SPERM ACROSOME ASSOCIATED 1 PROTEIN
L12            0 S SPERM ACROSOME PROTEIN

=> s SAMP32
L13            1 SAMP32

=> d his

     (FILE 'HOME' ENTERED AT 14:45:22 ON 03 MAY 2005)

     FILE 'CAPLUS' ENTERED AT 14:45:31 ON 03 MAY 2005
L1           291 S SEMINAL PLASMA PROTEIN
L2             2 S SAMP32
L3           374 S ANTIGENIC COMPOSITION
L4             0 S L1 AND L3

     FILE 'MEDLINE' ENTERED AT 14:47:17 ON 03 MAY 2005
L5             1 S SAMP32
L6            20 S ANTIGENIC AND SEMINAL PLASMA PROTEIN
L7           446 S ANTIGENIC COMPOSITION
L8             0 S L7 AND L1
L9          8281 S ISOANTIGENS
L10            7 S L1 AND L9
L11            0 S SPERM ACROSOME ASSOCIATED 1 PROTEIN
L12            0 S SPERM ACROSOME PROTEIN
L13            1 S SAMP32
```